

ABSTRACT OF THE DISCLOSURE

New routing techniques over a packet switching network so that the protocol processing at inter-node line cards is drastically simplified or even eliminated altogether. These techniques utilize an ingress node of the packet switching network for translating the routing information into a fixed route encoded as a sequence of in-band control signals, fragmenting the packet into cells of a fixed length, and affixing the sequence of in-band control signals in front of each of the cells, deploying the in-band control signals in a sequence in nodes on the route to guide each of the cells through the sequence of nodes and then consuming the in-band control signals, and at an egress node reassembling the cells into the packet.